



NYC Environmental Protection, Bureau of Water and Sewer Operations (BWSO) 59-17 Junction Boulevard, 3 <sup>rd</sup> Floor Low-rise, Flushing, New York 11373-5108	
Document Control Number (DCN):	FO-GLN-002.03-17
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## MANAGEMENT AND TRACKING OF RECURRING SEWER BACKUPS


Responsible Office: NYC Environmental Protection, Bureau of Water and Sewer Operations (BWSO)

Primary Division: Field Operations (FO)/All

Applicability: Field Operations (FO)/All, Operations Analysis & Regulatory Compliance

Effective Date: December 18, 2017

Approved By: Jerry Fragias, P.E., Director, Field Operations

Signature:  Date: 12/18/17

Revision	Date	Responsible Person	Description of Change
0	03/07/2011	A. Georgelis	Initial release
1	09/08/2011	A. Georgelis	Redraft and reformat
2 <sup>1</sup>	12/03/2012	A. Georgelis	Revised SOAP program for improved effectiveness; document changed to guideline, document identification number changed
3	12/12/2017	Jerry Fragias	Analysis changed from quarterly to a 3-month rolling average basis; references to Hansen changed to IPS.

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<sup>1</sup> This document was previously classified as an SOP. It has been changed to a Guideline (GLN) for this issuance. The document control number has remained the same, with exception of the GLN type classifier being updated.



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## A. PURPOSE

The purpose of this procedure is to reduce the occurrence of sewer backups (SBUs) by establishing methods and accountability for proactive evaluation and management of recurring issues that result in repeated confirmed SBUs. This can be accomplished through proactive inspection and diagnosis of areas experiencing repeated issues. This Guideline will be reviewed periodically based on field experiences to ensure that the corrective measures taken are performed at a high level of effectiveness.

## B. SCOPE

This procedure applies to steps taken by Bureau analytical resources, Field Operations management and personnel and the Capacity, Management, Operations, and Maintenance (CMOM) Unit. Every month, the previous three months shall be analyzed with respect to:

- The street segments with the highest number of confirmed SBU complaints within each maintenance yard service area (when operational resources allow, the segments that have experienced greater than 1 confirmed SBU for the preceding three months)
- The street segments previously flagged as a recurring issue that experience another SBU occurrence within a year of completion of analysis and implementation of all identified remedial actions.

## C. BACKGROUND

BWSO Field Operations receives an average of 5,000 confirmed SBU complaints per year.

## D. DEFINITIONS

SBU: Sewer Back Up

Confirmed SBU: DEP deems an "SBU" as confirmed when upon field investigation a backup complaint is determined to be associated with a failure of DEP's sewer system. Indications of such failure include surcharging, blockages, and collapses.

Unconfirmed SBU: DEP deems an "SBU" as unconfirmed when a backup complaint, upon field investigation, exhibits none of the factors above. In such situations, the "SBU" is found to be associated with an internal condition, a problem with the private sewer connection or otherwise unfounded.

SOAP: SBU Operations and Analysis Program. A geospatial analysis of 311 data produced on a monthly basis for the previous three months for areas in the city experiencing repeated, confirmed SBU complaints and the actions associated with addressing those instances.

CSR Customer Service Request

EHS Environmental Health & Safety

CMOM: Capacity, Management, Operations, and Maintenance (of sewer system)





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## E. ROLES & RESPONSIBILITIES

ROLE	KEY RESPONSIBILITY
Analysis Unit	<ul style="list-style-type: none"> <li>Generate SOAP maps, including identification of segments to be analyzed due either to confirmed complaint volumes or recurrence of issues after implementation of remedial actions under the program.</li> </ul>
Borough Manager	<ul style="list-style-type: none"> <li>Conduct analysis on street sewers segment experiencing recurring SBUs.</li> <li>Inspect and clean areas as needed.</li> <li>Identify appropriate remedial action.</li> <li>Ensure remedial actions are implemented.</li> </ul>
CMOM Unit	<ul style="list-style-type: none"> <li>Conduct analysis on segments with recurrence of SBUs after implementation of remedial actions under the program.</li> <li>Inspect and clean areas as needed.</li> <li>Identify appropriate remedial action.</li> <li>Track &amp; ensure all remedial actions are implemented.</li> </ul>
Chief	<ul style="list-style-type: none"> <li>Chair progress meetings.</li> <li>Complete, review, approve and send all referrals to the appropriate unit/section (e.g., CMOM, Emergency Construction, etc.).</li> <li>Submit referrals to Capital Project Development to Director, Field Operations, for review, approval and sign off.</li> </ul>
Director, Field Operations	<ul style="list-style-type: none"> <li>Based on SOAP analysis of recurrences within the rolling 3-month period, approve issuance of work to begin the initiation of SOAP work.</li> <li>Chair progress meetings.</li> <li>Review and approve referrals to Capital Project Development.</li> </ul>

## F. EHS POLICIES & REGULATIONS

- Guideline for Sewer Hook Use
- Personal Protective Equipment (PPE)
- Traffic Work Zone Safety
- Sanitation, Disease Prevention and Hygiene
- PPE Matrix Sewer Maintenance
- BWSO EHS Guideline for Short Duration and Mobile Work Zone Setups on Highways and High Speed Roadways

## G. TASK-SPECIFIC EQUIPMENT & SUPPLIES

- Access to SOAP analysis



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## H. PROCEDURE

**Step 1:** *Trigger: on a monthly basis.*  
**Analysis Unit: generate Recurring Sewer Backup Report**

The Analysis Unit will generate the SOAP analysis in GIS for the previous three months.

**Step 2:** **Analysis Unit: issue CSRs for the period**

Upon approval from Director as to the segments that will be analyzed, create and issue work to the responsible parties.

**Step 3a:** **Borough Managers: conduct investigations of street segments and initiate remedial actions**

The Borough Managers shall ensure that each street segment on their recurring list is inspected. The inspection shall determine what the root cause of the recurring SBU is.

For segments that are cleaned: the material removed, linear footage cleaned, and other cleaning operations conducted (e.g., liquid degreaser application) must be captured in IPS as a Work Order linked to the recurring SBU CSR. In addition, the type of diagnostic remedial action implemented should be tracked

**Step 3b:** **CMOM Unit: conduct investigations and initiate remedial actions**

The CMOM Unit shall investigate the segments on its recurring list. This unit is tasked with establishing root cause for any location experiencing a repeated occurrence after being addressed by the SOAP program and making recommendations for corrective action to prevent future SBU's from occurring.

This investigation shall not be limited to this segment only, the drainage area may also need to be investigated. If required, an analysis of the segment's design capacity and construction (e.g., improper slope, insufficient velocity) and the physical condition of the sewer pipe may be required.

For segments that are cleaned, the material removed, linear footage cleaned and other cleaning operations conducted (e.g., liquid degreaser application) must be captured in IPS as a Work Order linked to the recurring SBU CSR.





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The CMOM Unit is also responsible for tracking and reporting these recommendation(s) of corrective actions and referrals until they are completed.

**Step 4: Directors and Chiefs: chair periodic progress meetings:**

The Director and/ or his designated Chief shall conduct periodic meetings to review all involved staff's progress on this program. The meetings shall occur as frequently as needed to effectively run this program. Linear footage cleaned, progress and issues to date will be discussed and addressed. Any delay or other issues that may jeopardize progress under the program must be identified to the Director and Chiefs at the meeting.

**Step 5: Borough Manager/CMOM Unit: execute remedial actions**

The Borough Manager and CMOM Unit shall ensure execution of all agreed-upon remedial actions by tracking the updates of these actions in Hansen. This includes but is not limited to: adding or removing locations from programmatic cleaning cycles; submitting approved referrals to Emergency Construction or Project Development; referring locations to the Bureau of Wastewater Treatment (BWT) Compliance Engineering Section, Grease Remediation Unit; or continuing cause investigations where required.

The Borough Manager/CMOM Unit shall identify any delayed remedial actions to the Director.

**I. PROCESS COMPLETION CRITERIA**

- All field work to be initiated with IPS CSRs, Work Orders and IPS tickets updated.
- Production of SOAP maps.

**J. REPORTED PERFORMANCE MEASURES**

- Number of confirmed SBU complaints received
- Number of confirmed SBUs resolved
- Number of cleaned street segments with confirmed SBUs
- Sewers flushed with liquid degreaser (programmatic)
- Sewers flushed (programmatic)
- Overall cleaning for each Borough

**K. QA/QC**

- IPS Work Order Activity Codes are properly entered
- All data entered within five working days of receipt and final reports produced for management QA/QC review and approval
- Yard Clerks file all records and reports
- Review work per Auditing and QA/QC Program SOP



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#### L. REFERENCES AND RESOURCES

- SOP – Sewer Backup Response
- SOP – Fats, Oils and Grease referrals and Programmatic Scheduling